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PROVISIONAL SPECIFICATION

An Improved Device for Containing and Delivering Toilet Paper and Other Sheet Materials especially for Toilet and Allied Purposes

We, TALFACTO LIMITED, a British Company, of 226, Queens Drive, Blackpool, in the County of Lancashire, ARTHUR TALBOT and HAROLD CRITCHLEY, both British subjects and both of the Company's address, do hereby declare the nature of this invention to be as follows:—

This invention relates to devices for containing and delivering toilet paper and other sheet materials especially for toilet and allied purposes, and has for its object to provide a device incorporating means for spraying disinfectant, germicidal or deodorant liquid into the atmosphere in the region of the said device when the latter is operated to deliver the sheet material at therefrom.

According to the invention a pump supplying disinfectant, germicidal or deodorant liquid to a spraying nozzle is operatively connected to a member to which motion is imparted during delivery of the paper or other material from the device, so that the pump is actuated during such delivery to produce a spray of said liquid from the nozzle.

The paper or other material is conveniently in the form of a roll from which it is withdrawn by co-operating feed rollers or equivalent devices rotated by a handle which also operates the pump. The feed rollers may be rotated by the handle through the intermediary of ratchet or equivalent mechanism, the handle having an operating stroke and a return stroke, and being so connected to a reciprocating pump piston that it effects a power stroke of the piston during either its operating or return stroke, and a suction stroke of the piston during its other stroke.

In one form of device according to the invention, a cabinet, conveniently formed of sheet metal, is rectangular in

plan, and has a top which slopes downwardly from the back to the front. The front wall is hinged along its upper edge, and provided with any convenient form of catch for securing it to the front edge of the base. A spindle extending horizontally between the side walls of the cabinet is adapted to carry a roll of toilet paper, the spindle being removable to enable a roll of paper to be mounted thereon. Immediately behind the front wall, a pair of feed rollers extend between the side walls of the cabinet, the rollers being covered with slightly resilient material such as felt and being so mounted that they press upon one another. The pass between the rollers is substantially at the same level as the spindle which carries the toilet roll, and is also aligned with a slot in the front wall of the cabinet, the slot being provided on the inner side of the wall with convergent guide plates. A pulley turning with the lower roller is connected by a belt to a larger pulley loosely mounted on a spindle projecting through one side wall of the cabinet and carrying a handle on the outer side of the latter. A ratchet wheel is secured to one face of the larger pulley. A boss, plate or other convenient mounting carried by the handle spindle within the cabinet has pivotally mounted thereon a pawl resiliently urged into engagement with the teeth of the ratchet, and a spring is provided to urge the handle towards a stop defining one limit of its movements. The ratchet and pawl are so arranged that the pulley is rotated by movement of the handle away from the stop, the pawl moving idly over the ratchet teeth during the return movement of the handle. A reservoir is provided in the upper part of the container to contain disinfectant, germicidal or deodorant liquid, prefer-

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ably a perfumed germicide, and a pump cylinder, mounted in a vertical position in the reservoir, has an inlet valve or port communicating with the said reservoir, and an outlet connected by a conduit to a spray nozzle mounted in the sloping top wall of the cabinet.

A plunger slidable in the cylinder is coupled to an arm outside the reservoir and extending across the cabinet, the arm being pivotally mounted at one end in the cabinet and being pivotally connected at its other end to a link arranged substantially vertically and extending downwardly, the lower end of the link being pivotally connected to an arm turning with the handle. The parts are so arranged that, with the handle against its stop, the plunger is fully retracted in the cylinder, movement of the handle away from its stop moving the plunger into the cylinder to eject liquid through the spray nozzle.

The free end of the roll of toilet paper is passed between the feed rollers and through the slot in the front wall of the cabinet, and it will be understood that, as the paper is gripped between the feed rollers, rotation of these latter will feed the paper through the slot. Thus, when the handle is moved away from its stop through an angle, preferably determined by a second stop, a length of paper is fed through a slot, and the disinfectant, germicidal or deodorant liquid is sprayed through the nozzle into the surrounding atmosphere, the handle being returned by its spring, when released, to re-charge the pump and re-set the ratchet for the delivery of a further length of paper.

A filling orifice for the liquid reservoir may be provided in the top of the cabinet,

the orifice being closed by a filler cap, and accessories such as a mirror and an ashtray and a plate bearing advertising matter may be mounted externally on the front wall of the cabinet. The cabinet is conveniently adapted for attachment to a wall or door.

In another arrangement according to the invention, delivery of the paper is obtained by pulling on the exposed end of the roll. The paper passes between rollers similar to the feed rollers described in connection with the preceding arrangement, and one of the rollers is connected by gearing to a crank which is adapted to make one complete rotation during the delivery of a predetermined length of paper.

The crank is coupled to the link operating the pump plunger in such a way that, at the completion of the delivery of a length of paper, the link and crank are aligned, and the plunger is in its fully retracted position. Thus, during the delivery of a piece of paper of the predetermined length, the plunger makes a delivery stroke and a suction stroke, and liquid is delivered to the spray nozzle during the delivery stroke. Latch means may be provided to prevent the delivery of more than one predetermined length of paper at a time.

The last described arrangement may be applied to devices in which towelling is transferred from one roller to another within a casing to renew repeatedly an external loop between the rollers.

Dated this 22nd day of November, 1946.

For the Applicants,
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COMPLETE SPECIFICATION

An Improved Device for Containing and Delivering Toilet Paper and Other Sheet Materials especially for Toilet and Allied Purposes

We, TALFACTO LIMITED, a British Company, of 226, Queens Drive, Blackpool, in the County of Lancashire, ARTHUR TALBOT and HAROLD CRITCHLEY, both British subjects and both of the Company's address, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

This invention relates to devices for containing and delivering toilet paper and other sheet materials especially for

toilet and allied purposes, and has for its object to provide a device incorporating means for spraying disinfectant, germicidal or deodorant liquid into the atmosphere in the region of the said device when the latter is operated to deliver the sheet material therefrom.

According to the invention, in a device for containing and delivering toilet paper or other sheet material, a pump supplying disinfectant, germicidal or deodorant liquid to a spraying nozzle is operatively connected to a member to

which motion is imparted during delivery of the paper or other material from the device, so that the pump is actuated during such delivery to produce a spray of said liquid from the nozzle.

The paper or other material may be delivered by the rotation of one of a pair of feed rollers, the said roller being operated by a handle which also operates the pump.

The invention is hereinafter described with reference to the accompanying drawings, in which:—

Figure 1 is a front elevation of a device according to the invention;

Figure 2 is an enlarged sectional elevation looking from the front of the device; and

Figure 3 is a section on the line 3—3 of Figure 2.

Referring to the drawings, the device comprises a casing 10 of sheet metal in the front of which is a large opening closed by a panel 11 hinged to the casing 10 along its lower edge so as to open downwardly and outwardly as indicated in chain-dotted lines in Figure 3. The panel is held in the closed position by a catch 12 at its upper edge.

A roll 13 of toilet paper is supported on a roller 14 in the casing, the paper being led from the roll 13 between two feed rollers 15 and 16, and so through a slot 17 in the front panel 11 of the casing. The feed rollers 15 and 16 are covered with slightly resilient material such as felt, and are so mounted that they press upon one another. The feed roller 16 is carried on a spindle 18 which also carries a small pulley 21 connected by a belt 22 to a larger pulley 23 mounted on a shaft 24 co-axial with the roller 14. A ratchet wheel 25 is also mounted on the shaft 24, between the arms 26, 26 of a bifurcated member 27 which is itself free to turn on the shaft, and carries a pawl 28 spring-urged into engagement with the teeth of the ratchet wheel. The member 27 carries a handle 31 which projects through a vertical slot 32 in the front of the casing to one side of the removable front panel, and also carries a connecting rod 33 the other end of which is pivotally attached to the piston 34 of a pump, the cylinder 35 of which is mounted vertically in the casing by means of brackets 36. A spring 37 surrounds the connecting rod 33, and acts between an abutment 38 on the rod and the end of the pump cylinder 35, to urge the piston 34 towards the lower end of the cylinder, and also to move the handle 31 upwardly. A tube 41 leads from the upper end of the pump cylinder 35 to a spray nozzle 42 mounted on the top of

the casing, the tube having a horizontal portion 43 from which a branch tube 44 extends vertically downwardly into a reservoir 45 adapted to contain disinfectant, germicidal or deodorant liquid. A filler cap 46 is provided for the reservoir. The ends of the slot 32 form stops which limit the movement of the handle.

The shaft 24 is mounted between the legs of a U-shaped bracket 47 welded to the back and side of the casing, one leg of the bracket carrying a block 48 serving to support one end of the roller 14, the other end of which is supported by a block 51 welded to the casing. Each of the blocks 48 and 51 is formed with a slot opening in a forward and upward direction, into which fits a reduced end of the roller 14.

The panel 11 is fitted with a mirror 52 and an ashtray 53, as shown in Figure 1.

The handle 31 is normally held against the upper end of the slot 32 by the spring 37, the pump piston 34 being then at the lower end of its cylinder. To deliver a length of paper, the handle is moved downwardly to the lower end of the slot, rotating the pulley 23 through the ratchet mechanism, and thus turning the feed roller 16 to draw a length of paper off the roll 13. The movement of the handle also moves the piston 34 upwardly in the pump cylinder 35, forcing air through the pipe 41, so that it entrains liquid from the reservoir 45 and delivers it through the nozzle 42 as a spray. When the handle 31 is released, it is returned to the upper end of the slot by the spring 37, the pawl riding idly over the ratchet wheel so that the pulley 23 remains stationary, and the pump piston 34 returning to the lower end of the cylinder and so drawing a fresh charge of air into the said cylinder.

Having now particularly described and ascertained the nature of our said invention and in what manner the same is to be performed, we declare that what we claim is:—

1. A device for containing and delivering toilet paper or other sheet material, wherein a pump supplying disinfectant, germicidal or deodorant liquid to a spraying nozzle is operatively connected to a member to which motion is imparted during delivery of the paper or other material from the device, so that the pump is actuated during such delivery to produce a spray of said liquid from the nozzle.

2. A device according to claim 1, wherein the paper or other material is delivered by the rotation of one of a pair of feed rollers, the said roller being operated by a handle which also operates the

- pump.
3. A device according to claim 2, wherein the handle has a to-and-fro motion, and is connected to the feed roller by ratchet mechanism so that it rotates the feed roller in one direction only.
4. A device according to claim 3, wherein the pump is operated by a mechanical linkage moving with the handle.
5. A device according to any preceding claim wherein the toilet paper or like material is in the form of a roll, and is housed in a cabinet enclosing the feed

rollers, the pump, a reservoir for the disinfectant, germicidal or deodorant liquid, and the operating mechanism.

6. A device for containing and delivering toilet paper or other sheet material, substantially as described with reference to the accompanying drawings.

Dated this 19th day of December, 1947.

For the Applicants,
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[This Drawing is a reproduction of the Original on a reduced scale.]

Fig. 1.

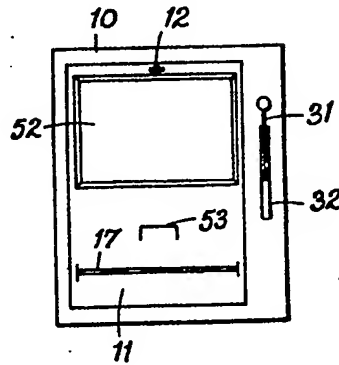


Fig. 3.

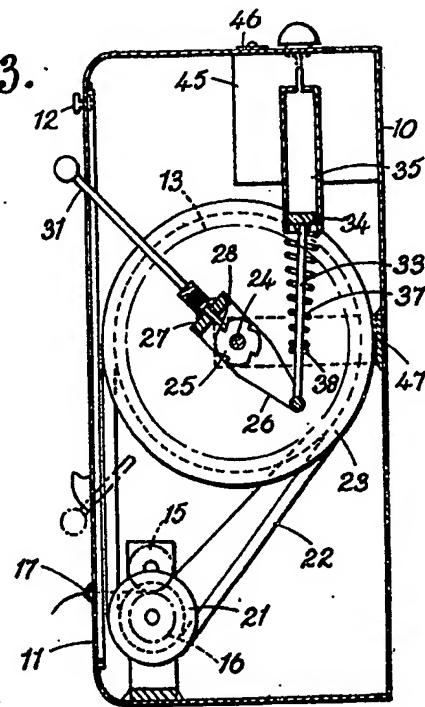
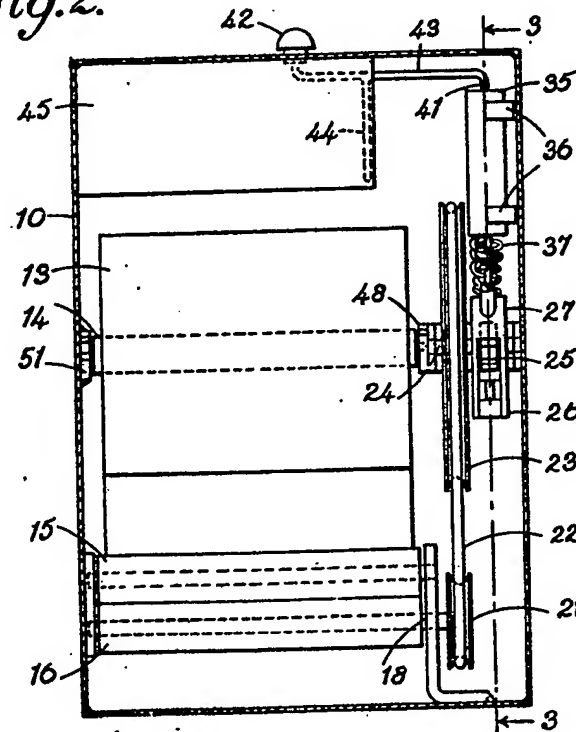


Fig. 2.



H.M.S.O. (Ty.P.)

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